

CLAIMS:

1. An apparatus for isolating a microorganism from a liquid, the apparatus comprising:
 - a first endcap engageable with an inlet end of a hollow fibre filter, the first
5 endcap including a first passage having an inlet engageable with a liquid input conduit;
and an outlet into the filter; and
 - a second endcap engageable with an outlet end of the hollow fibre filter, the
second endcap including a second passage having an outlet engageable with a liquid
return conduit, and an inlet from the filter;
 - 10 the first passage and the second passage being independently sized such
that in conjunction with a flow restriction means which restricts a flow of the liquid
through the second passage, a predetermined exit liquid flow rate from at least one
permeate outlet of the filter is achieved;
 - the microorganism is captured within the hollow fibre filter; and
 - 15 the maximum working pressure of the hollow fibre filter is not exceeded.
2. The apparatus according to claim 1, wherein the hollow fibre filter is a
haemodialysis filter.
3. The apparatus according to claim 1, wherein the liquid is a finite liquid sample
supply and the first endcap further comprises a pressure relief valve, wherein the
20 pressure relief valve provides a fluid pathway from the inlet end of the filter to the
finite liquid sample supply when the liquid pressure applied to the filter approaches the
maximum working pressure of the filter such that the maximum working pressure of
the filter is not exceeded.
4. The apparatus according to claim 1, wherein the predetermined exit liquid flow
25 rate is in the range of from about 0.25 l/min to about 3.0 l/min.
5. The apparatus according to claim 1, wherein the predetermined exit liquid flow
rate is about 1.5 l/min.
6. The apparatus according to claim 1, wherein the maximum working pressure of
the hollow fibre filter is about 25 psi.
- 30 7. The apparatus according to claim 1, wherein the first passage and the second
passage are circular, each having a diameter in the range from about 6 mm to about 30
mm.
8. The apparatus according to claim 1, wherein the first passage and the second
passage each have a diameter of about 21 mm.
- 35 9. The apparatus according to claim 1, wherein the microorganism is selected from
the group consisting of bacteria, protozoa and viruses.

10. A method for isolating a microorganism from a liquid, the method comprising the step of:

- (i) capturing and concentrating the microorganism on a hollow fibre filter by passing a sample of the liquid through the hollow fibre filter, the hollow fibre filter
5 having a first endcap engaged with the inlet end of a hollow fibre filter and a second endcap engageable with the outlet end of the hollow fibre filter, the first endcap including a first passage having an inlet engageable with a liquid input conduit; and an outlet into the filter so as to provide a fluid pathway between the filter and a liquid input conduit, and the second endcap including a second passage having an outlet
10 engageable with a liquid return conduit, and an inlet from the filter so as to provide a fluid pathway between the filter and a liquid return conduit;

wherein the size of first passage and the second passage have been predetermined such that upon restriction of liquid flow rate through the liquid return conduit, a predetermined exit liquid flow rate from at least one permeate outlet of the
15 hollow fibre filter is achieved; and

the pressure of the liquid passed through the hollow fibre filter is less than the maximum working pressure of the hollow fibre filter.

11. The method according to claim 10, further comprising the step of removing the captured microorganism from the hollow fibre filter, and optionally further
20 concentrating the captured microorganism.

12. The method according to claim 10 wherein the hollow fibre filter is a haemodialysis filter.

13. The method according to claim 10 wherein the predetermined exit liquid flow rate is in the range of from about 0.25 l/min to about 3.0 l/min.

- 25 14. The method according to claim 10, predetermined exit liquid flow rate is about 1.5 l/min.

15. The method according to claim 10, wherein the maximum working pressure of the hollow fibre filter is about 25 psi.

16. The method according to claim 10, wherein the first passage and the second
30 passage are circular, each having a diameter in the range from about 6 mm to about 30 mm.

17. The method according to claim 10, wherein the first passage and the second passage each have a diameter of about 21 mm.

18. The method according to claim 10, wherein the microorganism is selected from
35 the group consisting of bacteria, protozoa and viruses.

19. An endcap for engagement with a hollow fibre filter, the endcap comprising:

a first end engageable with an end of the hollow fibre filter;
a passage having an inlet engageable with a liquid input conduit; and
an outlet into the filter;

wherein the passage has a diameter in the range of from about 6 mm to
5 about 30 mm.

20. The endcap according to claim 19, wherein the hollow fibre filter is a haemodialysis filter.

21. The endcap according to claim 19 wherein the passage has a diameter of about 21 mm.

10 22. The endcap according to claim 19, further comprising a pressure relief valve, wherein the pressure relief valve provides a fluid pathway from the passage to atmosphere.